

Title (en)

BALL TYPE PRESSURE RELIEVING ACTUATOR FOR USE WITH TURBOCHARGERS

Title (de)

KUGELFÖRMIGES DRUCKENTLASTUNGS-STELLGLIED ZUR VERWENDUNG MIT TURBOLADERN

Title (fr)

ACTIONNEUR DE DÉCOMPRESSION DE TYPE À BILLE À UTILISER AVEC DES TURBOCOMPRESSEURS

Publication

**EP 3049650 A4 20170419 (EN)**

Application

**EP 14844415 A 20140905**

Priority

- US 201361875829 P 20130910
- US 2014054189 W 20140905

Abstract (en)

[origin: WO2015038414A1] A wastegate valve (34) for a turbocharger includes a ball-type valve member (35), which is movable relative to a valve seat (37), and a spring-biased piston (57). A valve spring (52) biases the valve member (35) toward the closed position in engagement with the valve seat (37). The piston (57) also biases the valve member (35) to the closed position. While the piston (57) normally closes the valve member (35), a pressure source is operable to selectively drive the piston (57) away from the valve member (35) so that the valve member (35) is acted upon solely by the valve spring (52). The valve spring (52) is set such that exhaust gas pressure can open the waste gate valve (34) and allow self-compensating adjustment in response to exhaust gas pressure.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [X] EP 2067956 A1 20090610 - CATERPILLAR MOTOREN GMBH & CO [DE]
- [X] WO 2008040907 A1 20080410 - ELECTRICFIL AUTOMOTIVE [FR], et al
- [I] DE 102010041841 A1 20120405 - BOSCH GMBH ROBERT [DE]
- [A] US 4236376 A 19801202 - HENKE ULRICH, et al
- [A] DE 19853391 A1 20000525 - MAN NUTZFAHRZEUGE AG [DE]
- [A] US 2415258 A 19470204 - PARKER ARTHUR L, et al
- [A] US 2351873 A 19440620 - PARKER ARTHUR L
- See references of WO 2015038414A1

Designated contracting state (EPC)

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